(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number: **0 413 550 A3**

(12) **EUROPEAN PATENT APPLICATION**

(21) Application number: **90308912.6**

(22) Date of filing: **14.08.90**

(51) Int. Cl.5: **C08F 293/00**, C08G 77/22, C08G 77/382, C08G 77/442

(30) Priority: **14.08.89 US 393550**

(43) Date of publication of application: **20.02.91 Bulletin 91/08**

(84) Designated Contracting States: **DE FR GB**

(88) Date of deferred publication of the search report: **26.02.92 Bulletin 92/09**

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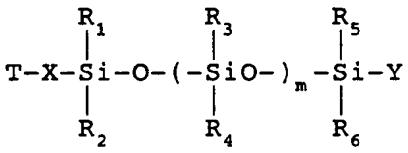
(54) Siloxane iniferter compounds, block copolymers made therewith and a method of making the block copolymers.

(57) The present invention provides novel siloxane iniferter compounds, block copolymers made therewith, and a method of making the block copolymers. The siloxane iniferter compounds can be represented by the formula



wherein
T and X are organic groups selected so that the T-X bond is capable of dissociating upon being subjected to an appropriate energy source to form a terminator free radical of the formula T• and an initiator free radical.
R_1, R_2, R_5 and R_6 are monovalent moieties selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{1-4} alkoxy and aryl which can be the same or are different;
R_3 and R_4 are monovalent moieties which can be the same or different selected from the group consisting of hydrogen, C_{1-4} alkyl, C_{1-4} fluoroalkyl including at least one fluorine atom and aryl;
Y is selected from the group consisting of -X-T and -Z wherein X and T are defined above and Z is an organic moiety that will not dissociate to form free radicals when subjected to said energy source; and
m is an integer of at least 10.

The initiator free radical is capable of initiating free radical polymerization of free radically polymerizable monomer. The terminator free radical is insufficiently capable of initiating free radical polymerization of free radically polymerizable monomer but is capable of rejoining with the initiator free radical or a free radical polymer segment free radically polymerized with the initiator free radical.

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EUROPEAN SEARCH REPORT

Application Number

EP 90 30 8912

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl.5)
E	EP-A-0 386 615 (MITSUBISHI PETROCHEMICAL COMPANYLIMITED) * whole document * *	1-8,10	C 08 F 293/00 C 08 G 77/22 C 08 G 77/382 C 08 G 77/442
X	WORLD PATENTS INDEX LATEST Week 8550, Derwent Publications Ltd., London, GB; AN 85-314533 & JP-A-60 220 341 (NIPPON TELEG & TELEPH) 5 November 1985 * abstract * *	1-4	
A	JOURNAL OF APPLIED POLYMER SCIENCE vol. 29, no. 3, March 1984, NEW YORK, USA pages 877 - 889; H.INOUE ET AL.: 'Surface Photografting of Hydrophilic Vinyl Monomers onto Diethyldithiocarbamated Polydimethylsiloxane' * page 877 * * * page 878, paragraph 2 * * * page 879, paragraphs 2, 3 * *	1-4,7,8, 10	
X	US-A-3 445 496 (J. W. RYAN) * column 2, line 25 - line 36; claim 4; examples 7,10 * *	1,4-6	
X	CHEMICAL ABSTRACTS, vol. 105, no. 20, 17 November 1986, Columbus, Ohio, US; abstract no. 173534S, H.INOUE ET AL.: 'Photografting of vinyl monomers into diethyldithiocarbamated polydimethylsiloxane' page 34 ; * abstract * & Kagaku to Kogyo (Osaka) 1986, 60(3), 81-90 *	1-4,7,8, 10	TECHNICAL FIELDS SEARCHED (Int. Cl.5) C 08 F C 08 G
D,A	GB-A-2 188 056 (GENERAL ELECTRIC COMPANY) * claims 1-19 * *	1,7,8,10	

The present search report has been drawn up for all claims

Place of search	Date of completion of search	Examiner
The Hague	10 December 91	KANETAKIS I.

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
Y : particularly relevant if combined with another document of the same catagory
A : technological background
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E : earlier patent document, but published on, or after the filing date
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